

Development of drug delivery systems based on layered hydroxides for nanomedicine

ABSTRACT

Layered hydroxides (LHs) have recently fascinated researchers due to their wide application in various fields. These inorganic nanoparticles, with excellent features as nanocarriers in drug delivery systems, have the potential to play an important role in healthcare. Owing to their outstanding ion-exchange capacity, many organic pharmaceutical drugs have been intercalated into the interlayer galleries of LHs and, consequently, novel nanodrugs or smart drugs may revolutionize in the treatment of diseases. Layered hydroxides, as green nanoreservoirs with sustained drug release and cell targeting properties hold great promise of improving health and prolonging life.

Keyword: Layered hydroxides; Nanomedicine; Drug delivery; Nanocomposite; Nanocarrier; LDH; ZLH; Cytotoxicity assay